

## **APPENDIX L**

### **FORT BELVOIR ENVIRONMENTAL PROTECTION SPECIFICATIONS APPLICABLE TO CONSTRUCTION CONTRACTS**

## ENVIRONMENTAL PROTECTION

### PART 1 GENERAL

#### 1.1 GENERAL

Work covered by this section includes furnishing all labor, materials and equipment and performing all work required to prevent or control environmental pollution resulting from construction operations required under this contract except for those measures set forth in other sections of these specifications. Herein, environmental pollution is defined as the presence of chemical, physical or biological elements or agents in air, water and on land which adversely affect human health or welfare; unfavorably alter ecological balances important to human life or affect other species of importance to humanity.

#### 1.2 APPLICABLE REGULATIONS

Contractor and his subcontractors, in performance of work under this contract, shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and prevention, as well as all applicable provisions of Corps of Engineers Manual EM 385-1-1 (Safety and Health Requirements Manual, Oct 87). Minimum standards to meet Virginia Erosion & Sediment Control Regulations (VR 625-02-00) are found in Chapter 8, 1992 Edition of the Virginia Erosion & Sediment Control Handbook.

#### 1.3 NOTIFICATION

Contracting Officer shall notify Contractor in writing of any noncompliance with provisions in this section and the action to be taken. The Contractor shall take corrective action immediately upon receipt of such notice. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue a Stop Order on all or part of the work until satisfactory corrective action has been taken. No part of time lost due to any such Stop Orders shall be made the subject of a claim for time extension or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

#### 1.4 SUBCONTRACTORS

Compliance with these provisions by subcontractors shall be the responsibility of the Contractor.

#### 1.5 WATER RESOURCE PROTECTION

The Contractor shall not pollute streams, lakes, reservoirs etc. with fuels, oils, bitumens, calcium chloride, acids, construction wastes or any other harmful materials. Contractor is responsible to investigate and comply with all applicable Federal, State and local laws concerning pollution of water resources. All work under this contract shall be performed such that objectionable conditions will not be created in bodies of water in or adjacent to the project area(s).

#### 1.6 LAND RESOURCE PROTECTION

Land resources within project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition that appears natural and does not detract from the appearance of the work. Contractor shall confine

his construction activities to areas defined by contract plans and specifications.

#### 1.6.1 EROSION CONTROL

The contractor shall submit for approval, an erosion and sedimentation control plan for each delivery order as required by the Contracting Officer. Each plan shall conform to the minimum standards and specifications of the Virginia Erosion & Sediment Control Handbook. For delivery orders not requiring a plan, the contractor is responsible to meet the minimum requirements for controlling erosion and sedimentation from any land-disturbing activities.

- 1.6.1.1 No disturbed area will be left denuded for more than 90 calendar days unless otherwise authorized by the Contracting Officer. Disturbed area not paved, sodded or built upon by 1 November, or disturbed after that date, are to be seeded within 15 days with oats, abuzzi rye or equivalent and mulched with hay or straw mulch at the rate of two tons per acre.
- 1.6.1.2 All erosion and sediment control measures are to be placed prior to or as the first step in grading.
- 1.6.1.3 All temporary earth berms, diversions, sediment dams and stock piles are to be seeded and mulched with straw for temporary vegetative cover within 7 days after grading.
- 1.6.1.4 During construction all storm sewer inlets will be protected from sedimentation. Inlet protection shall be maintained or modified as required by the construction process.
- 1.6.1.5 Structural measures such as berms, dikes, traps, basins, etc., will be installed and stabilized according to this plan prior to any other grading, clearing, or disturbance of the existing surface of the site.
- 1.6.1.6 All structural sediment control measures are to remain in place until permission for their removal has been obtained from the Contracting Officer. All temporary erosion and sediment controls will be removed and the areas stabilized prior to final payment of the delivery order.

#### 1.7 PROTECTION OF RETAINED TREES

- 1.7.1 Contractor shall be responsible for the protection of the tops, trunks and roots of all existing trees that are to be retained on the site. After trees have been removed along the limits of clearing, protective devices shall be installed as soon as possible. Protection shall be maintained until all work in the vicinity has been completed and shall not be removed without the written approval of the Contracting Officer. If the Contracting Officer finds that the protective devices are insufficient to protect the trees retained on the site, additional protective devices shall be installed to insure adequate protection.
- 1.7.2 Heavy equipment, vehicular traffic or stockpiling of any materials shall not be permitted within the drip line of trees to be retained.
- 1.7.3 No toxic materials shall be stored within 100 (one hundred) feet from the drip line of trees to be retained.
- 1.7.4 Except in areas marked on the plans to be cleared, the Contractor

shall not deface, injure or destroy trees or shrubs, nor remove or cut them without special authority. No ropes, cables or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Contracting Officer. Where such special emergency use is permitted, the Contractor shall first adequately wrap the trunk with a sufficient thickness of burlap or rugs over which softwood cleats shall be tied before any rope, cable or wire is placed.

- 1.7.5 No protective devices, signs, utility boxes or other objects shall be nailed to trees to be retained on the site.

- 1.7.6 Devices

Any device may be used which will effectively protect the roots, trunk and top of the trees retained on the site. Personnel working in the vicinity of the trees must be instructed to honor the protective devices. The protective devices outlined below are suggestion only and are not intended to exclude the use of other devices which may be approved by the Contracting Officer to protect the trees retained.

- 1.7.6.1 Snow Fence

Standard 4 (four) foot high snow fence shall be placed at the drip line on posts mounted 6 (six) feet apart.

- 1.7.6.2 Board Fencing

Board fencing consisting of 4 x 4 posts set securely in the ground and protruding at least 5 (five) feet above the ground shall be placed at the drip line with a minimum of two horizontal boards between each post.

- 1.7.6.3 Posts, String and Flagging

Posts with a minimum size of 2 x 2 or 2 (two) inch diameter set securely in the ground and protruding at least 5 (five) feet above the ground shall be placed at the drip line with two rows of string at least 2 (two) feet apart running between each post with colored surveyor's flagging tied securely to the string at 5 (five) foot intervals.

- 1.8 RESTORATION OF LANDSCAPE DAMAGE

Any trees or other landscape feature scarred or damaged by Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense. The Contracting Officer will direct what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and disposed of under requirements for clearing and grubbing. All scars made on retained trees by equipment, construction operations or by the removal of limbs larger than 1 (one) inch in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted. Where tree climbing is necessary, the use of climbing spurs will not be permitted. The use of climbing ropes shall be required by the Contracting Officer where necessary for safety. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Contracting Officer, shall be immediately removed and replaced with a nursery-grown tree of the same species. Replacement trees shall measure no less than 2 (two) inches in diameter at 6 (six) inches above the ground level.

#### 1.9 TECHNICAL ADVICE

Technical advice and additional information on tree preservation and planting may be obtained from the Baltimore District Corps of Engineers Office.

#### 1.10 STORAGE AND SERVICE FACILITIES

Contractor's storage and service facilities, required temporarily in the performance of the work, shall be located in portions of the job site or areas to be cleared, and require written approval of the Contracting Officer. Where buildings or platforms are constructed on sidehills, the Contracting Officer may require cribbing to obtain level foundations. Benching or leveling of earth may not be allowed depending on the location of the proposed facility.

#### 1.11 POST-CONSTRUCTION CLEANUP OR OBLITERATION

The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles for excess or waste materials and any other vestiges of construction operations as directed by the Contracting Officer. It is anticipated that excavation, filling and plowing of roadways will be required to restore the area to near natural conditions which will permit the growth of vegetation thereon. The disturbed areas shall be graded and filled as required, and forest litter, humus or topsoil or combination thereof shall be spread to a depth of approximately 6 (six) inches over the entire area and the entire area seeded. Restoration to original contours is required unless otherwise directed by the Contracting Officer.

#### 1.12 PROTECTION OF FISH AND WILDLIFE

The Contractor shall perform all work and take such steps as required to prevent any interference with or disturbance to fish and wildlife. The Contractor will not be permitted to alter water flows or otherwise disturb native habitat adjacent to the project area which, in the opinion of the Contracting Officer, are critical to fish or wildlife. Fouling or polluting of water will not be permitted.

#### 1.13 DUST CONTROL

Contractor shall maintain all work areas free from dust which contributes to air pollution. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment or similar methods may be permitted to control dust. Sprinkling, to be approved, must be repeated at such intervals as necessary to keep all parts of the disturbed area damp at all times and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

#### 1.14 BURNING

Burning of refuse and debris is not permitted.

#### 1.15 MAINTENANCE OF POLLUTION CONTROL FACILITIES

During the life of this contract, the Contractor shall maintain all facilities constructed for pollution control under this contract while operations creating the particular pollutant are being conducted or until

the material concerned has stabilized to the extent that pollution is no longer occurring.

1.16 FLUORESCENT FIXTURES

All fluorescent fixtures which are to be disposed of will have their ballasts, except those specifically identified as containing no polychlorinated biphenyls (PCB's), placed in 55-gallon containers and transported to Building 1495 for disposal by the Directorate of Public Works, Environmental and Natural Resource Division (703-806-4007).

PART 2 (NOT APPLICABLE)

PART 3 (NOT APPLICABLE)

END OF SECTION